

APPLICATION FOR UNITED STATES PATENT

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Invention: SHINGLE, IN PARTICULAR ROOF SHINGLE

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SPECIFICATION

Shingle, in particular Roof Shingle.

BACKGROUND OF THE INVENTION

1. Field of the Invention

The subject matter of the present Invention is a shingle, in particular roof shingle, wherein the shingle is characterized relative to the state-of-the-art in that both the laying speed as well as the placing precision are jump-like improved.

SUMMARY OF THE INVENTION

Brief Description of the Invention

The shingle according to the present Invention, in particular the roof shingle, is characterized in that the shingle exhibits a raised engagement and guiding element at its bottom side. According to a preferred embodiment both the raised guide element as well as the so-called shingle shoulder exhibit undercut zones, wherein the

undercut zones correspond to each other. Here the undercut zone in the raised engagement and guide element is formed like a female mold or stencil and the undercut zone in the shingle shoulder is formed like a male mold.

Shingles, in particular roof shingles, can be produced out of a variety of materials, for example out of mineral material, out of wood and more recently in a preferred degree out of a molten mixture of organic material, for example plastics and inorganic material, for example slate flour.

The shingle comprises essentially the shingle body, the shingle neck and the shingle shoulder as will be explained and illustrated in detail further down by way of drawings.

The shingle can further exhibit gutter canals on the upper side of the shingle neck as is known in principle.

The shingle is suitable for covering arbitrary surfaces, in particular roof surfaces.

As already recited above, the laying technology can be improved in multiple directions and jump-like upon application of the invention shingles, wherein during

laying each shingle assures simultaneously the restraint and restricted guidance of a shingle placed in the following. In addition, the desired positioning is necessarily obtained during laying and the necessary double covering is assured. The essence of the present Invention is explained in detail in the following by way of the accompanying figures, wherein these figures represent preferred embodiments of the present invention.

The novel features which are considered as characteristic for the invention are set forth in the appended claims. The invention itself, however, both as to its construction and its method of operation, together with additional objects and advantages thereof, will be best understood from the following description of specific embodiments when read in connection with the accompanying drawing.

BRIEF DESCRIPTION OF THE DRAWING

In the accompanying drawing, in which are shown several of the various possible embodiments of the present invention:

Figure 1 shows the bottom side of the Invention shingle.

Figure 2 shows the top side of the shingle.

Figure 3 shows the arrangement of three rows of placed shingles.

Figure 2 shows an arrangement of three rows of placed shingles.

Figure 3 shows a sectional view of a shingle placed on the roof.

Figure 4 shows a sectional view of a shingle attached to the rafters.

Figure 5 shows a perspective view of a bottom side of the shingle.

Figure 6 is a perspective detail view of the shoulder of the shingle.

DESCRIPTION OF INVENTION AND PREFERRED EMBODIMENT

The invention shingle is designated with the reference numeral 1 in figure 1, the shingle body is designated with the reference numeral 2, the shingle neck is designated with the reference numeral 3, and the shingle shoulder is designated with the reference numeral 4.

The raised engagement and guide element disposed preferably in the lower region of the shingle body carries the reference numeral 5 with the female mold like undercut zone 6.

The male mold like undercut zone of the shingle shoulder 4 carries the reference numeral 7.

Here the female mold like undercut zone 6 is a rear undercut with re-entrant angle, which female mold like undercut zone 6 serves for receiving the male like undercut zone 7 of the shoulder 4, wherein the undercut zone 4 is formed nearly sharp edged.

Here the female mold like undercut zone 6 is a rear undercut with re-entrant angle, which female mold like undercut zone 6 serves for receiving the male like undercut zone 7 of the shoulder 4, wherein the male mold like undercut zone 7 is formed nearly sharp edged.

The side 4 is situated in an angle of from about 40 to 50 degrees relative to side 2.

The side 6 is disposed perpendicular to the side 5.

The male mold like undercut zone 7 of the shoulder 4 is situated in an angle of from about 40 to 50 degrees relative to a face of the shingle body 2. The female mold like undercut zone 6 is disposed perpendicular to the face of the raised engagement and guide element 5. Alternatively, the female mold like undercut zone 6 is disposed at

an angle of from about 40 to 50 degrees to the face of the raised engagement and guide element 5 such a to shape match the male mold like undercut zone 7.

The geometric kind of the undercut zones 6 and 7 is furnished such at any rate that a slipping in of the zone 4 into the zone 6 is performed as complete as possible.

The geometric kind of the undercut zones 6 and 7 is furnished such at any rate that a slipping in of the male mold like undercut zone 7 into the female mold like undercut zone 6 is performed as complete as possible.

Here the width of the shoulder 4 is preferably dimensioned such that the width of the shoulder 4 corresponds to half the width of the raised engagement and guide element 5.

The roof is laid from the bottom to the top during the placement work in such a way as this is shown in detail in figure 3.

The roof is laid from the bottom to the top during the placement work in such a way as this is shown in detail in figures 2, 3 and 4.

Figure 2 shows the placement of the invention shingles under employment of attachment members, wherein the attachment members are designated with the reference numeral 8 and wherein the attachment elements are for example nails and/or rivets.

The shoulder 4 of the shingle exhibits an outer edge 10 which is sharp as a knife and which is shown in Fig.6.

The in principle known rafters are designated with the reference numeral 9.

A cross-section through the representation of figure 2 is shown in figure 3.

A detail of the representation of figures 2 and 3 is illustrated in figure 4.

The shingle according to the present invention can be subdivided in half or also in three parts in particular for forming the edge zones of roofs, wherein the half elements or third elements are part of the general present invention principle.

It will be understood that each of the elements described above, or two or more together, may also find a useful application in other types of roofing system configurations and shingle laying procedures differing from the types described above.

While the invention has been illustrated and described as embodied in the context of a shingle, it is not intended to be limited to the details shown, since various modifications and structural changes may be made without departing in any way from the spirit of the present invention.

Without further analysis, the foregoing will so fully reveal the gist of the present invention that others can, by applying current knowledge, readily adapt it for various applications without omitting features that, from the standpoint of prior art, fairly constitute essential characteristics of the generic or specific aspects of this invention.

What is claimed as new and desired to be protected by Letters Patent is set forth in the appended claims.